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XXXVI.—*Letters, Extracts, and Notes.*

We have received the following letters addressed "to the Editor":—

SIR,—Last year, when working out a collection of birds from Yunnan, I made a very careful examination of all the specimens of the various forms of *Prinia inornata* Sykes, contained in the Tring and British Museums. In reviewing the different forms of this species in the 'Novitates Zoologicae,' vol. xix. p. 299 I drew attention to the fact that the bird inhabiting Yunnan and Upper Burma as well as that found in Formosa diverged somewhat from the typical *Prinia inornata extensicauda* Swinhoe, from Amoy, but as many of the older specimens lacked precise data, I refrained from describing them. Since then Major H. H. Harington, with additional material of his own, has named both birds (Bull. B. O. C. vol. xxxi. p. 111), calling the former *P. i. burmanica* and the latter *P. i. formosa*. It seems to me that in only referring to the colours of their plumage he has missed their most striking characteristics, namely, the difference in the size of their bills.

In the work referred to above (apparently overlooked by Major Harington) I remarked that "birds from Yunnan and Upper Burma have very small bills; on the other hand, those from Formosa—as Swinhoe pointed out (*Ibis*, 1863, p. 299)—are 'rather larger,' and possess 'usually more robust bills.' They all agree, however, in having the back generally greyer and more olivaceous than *P. inornata*."

I am, Sir,

Yours &c.,

COLLINGWOOD INGRAM.

Westgate-on-Sea, Kent.

July 16th, 1913.

SIR,—In the Messaorea plain, within the Famagusta District of Cyprus, and about twelve miles from the sea, a large reservoir was made some few years ago near a village called Kouklia, for the double purpose of draining marshy land and of storing water for irrigation purposes in the dry season.

This reservoir is a large sheet of water covering an area—if the rains have been normal—of about $1\frac{1}{2}$ square miles in the spring and early summer. During the summer and autumn, owing to evaporation and to the using of the water for irrigation, the reservoir is of lesser extent, and in some years when the winter rain is late it becomes nearly dry.

Usually in the winter this place is the haunt of great quantities of wild fowl, Grebes, and Waders, and in the spring a great many migratory birds rest there for a time on their way to Asia Minor and further north.

In 1909 it was known that the *Podiceps nigricollis* and *Podiceps fluiatilis* frequented this reservoir, and the first specimens of the former Grebe were obtained; the Lesser Grebe had been met with before.

In the following year I obtained a specimen of the Great Crested Grebe (*Podiceps cristatus*), and their eggs were obtained at the same time, also the eggs of the Lesser Grebe. No eggs of the Eared Grebe, however, were found.

On the 1st of June last, when with a friend I was following the reedy edges of this reservoir, my attention was drawn to a small rushy islet of quite a few yards in extent by a Stilt that hovered over it and was evidently disturbed by my proximity to it. I waded to the islet through about two feet of water and found the Stilt's nest on it and five Eared Grebes' nests floating in the bordering rushes. All the nests had eggs.

There was a similar islet about ten yards off, and I noticed the glistening of eggs on the water about ten yards or so from it on the open. I waded across and found a chain of five more Eared Grebe's nests on the water-weed in the shallow water, about one foot in depth, and quite in the open. One nest was under water, and the two eggs in it were immersed. On going to the islet I found five more nests just outside it in the open, and I found three more nests floating in the rushes on the edge of the islet. All the eighteen nests had eggs in them; one nest only had four eggs in it, one had three eggs, and the remaining sixteen other nests had either two or one egg in them. All the nests were composed principally of water-weed, and the ten nests in the open were floating on the top of the growing water-weed. Only two nests had the eggs concealed by weed being placed over them.

It was rather a curious fact that although I had followed the bank of the reservoir for a good distance, I never saw a single parent bird, though usually a number are visible, and I have had no difficulty in obtaining specimens.

The eighteen nests were within a circle of thirty yards, roughly speaking.

I am, Sir,

Yours &c.,

FRANCIS R. S. BAXENDALE.

Milgate Park,

Bearsted, Kent,

August 4th, 1913.

The Undulatory Flight of Humming-Birds.—Mr. Robert C. Murphy, of the Brooklyn Museum, New York, sends the following account of some observations made by him on the migration flight of Humming-Birds in the West Indies :—

“During the summer of 1912 I spent several weeks on ship-board in the vicinity of Dominica and Martinique, West Indies, and in the strait between the two islands there were several opportunities for observing the flight of a Humming-Bird (which I believe to have been *Sericotes ho'osericeus*) under unusual and favourable conditions.

The first instance was on July 14th. At noon we lay midway in the strait, about nine miles from either island. The north-east trade-wind was blowing strongly, bringing frequent showers of rain, hence I was rather surprised to see a Humming-Bird pass, flying across the wind and in the direction of Martinique. On the afternoon of the same day a second flew by close to the ship. Both of these birds were flying about twelve feet above the water. In the early morning of July 17th, I saw a third, thirty or forty feet up in the air, and this time only about two miles from Dominica, toward which the bird was heading. On July 22nd, in calm weather, when we were not less than seven miles off the Martinique coast, a fourth hummer approached and seemed about to alight in our rigging, but suddenly veered and made off in the direction of Dominica. On the 24th a fifth was seen, flying only a few inches above a calm sea. The next day, when we were probably fifteen miles off the windward coast of Dominica, the nearest land, the sixth passed us, and, finally, on July 28th, when the trades were so strong that we were tacking under reefed sails, the seventh Humming-Bird flew vigorously past in the teeth of the wind.

The noteworthy feature as regards all of these Humming-Birds, aside from the obvious fact that they habitually make reckless journeys over a sea much given to squalls, was the *undulatory* character of their flight. In their natural habitat ashore, birds of this same genus, as well as other *Trochilidae*, appear to me to fly from one point to another, in an almost

mathematically straight line, sustaining themselves with practically synchronous vibrations of the wings. But here, over the open sea, when the birds were flying straightaway for considerable distances, a rythmical rise and fall was unmistakably apparent. The dip of the body, though less noticeable than in the flight of many Passerine birds, was nevertheless regular, and occurred, as nearly as I could judge, at intervals of about one second."

The Peruvian Guano Islands.—Dr. H. O. Forbes, M.B.O.U., the ornithologist appointed by the Peruvian Government to investigate the question of the guano deposits in the islands off the coast of Peru, has lately returned to England. The diminution in the quantity of guano had occasioned disquietude to agriculturists and it was decided to ascertain, if possible, the cause of the decline, which has been going on for some time. It so happened, however, that just before Dr. Forbes's arrival in Peru, which was early in January, 1912, a very remarkable incident occurred. For some reason, at present unaccounted for, in November, 1911, almost the whole of the birds on certain islands forsook their nests and newly-hatched young and did not return. Millions of nests containing many millions of dead birds were thus forsaken. Shocks of earthquake are not uncommon in these islands, and the birds which live there are always greatly alarmed when such disturbance occurs. They rise and wheel about in much agitation, exhibiting every evidence of the fear which the convulsions occasions in them. Dr. Forbes, after rejecting other and unsatisfactory theories, surmises that an exceptionally severe shock may have caused the birds in this instance to take the extremely uncommon course of forsaking their young. No one could say in what direction they migrated. His own belief is that they went north to the Galapagos Islands, but he was unable to verify this impression. The birds disappeared for three months and although they began to return in February and March, 1912, they did not resume breeding at that time, and

practically the guano of that season was lost, because a very large amount of the deposit takes place during the breeding season.

The guano islands lie all along the coast of Peru, beginning with the Lobos Islands in the north and extending down the coast to a point opposite Mollendo in the south—a distance of more than 1000 miles. When Dr. Forbes first arrived there was hardly a bird to be seen on the islands. For certain reasons his investigations were delayed until late in 1912, when he was invited by President Billinghurst to make suggestions as to the best means of increasing the guano supply. The President placed a small motor-boat at his disposal, and he visited the whole of the coast from the boundaries of Peru and Chile as far as the northern boundary. He investigated all the islands and roosting rocks along that coast, and was able to make suggestions as to their utilization in such a way that more guano might be collected on them.

There are about eight species of birds which are valuable as guano producers. The most important of these is Bougainville's Cormorant (*Phalacrocorax bougainvillii*), whose chief nesting-place is the Chincha Islands. On the middle one of these islands there were breeding in the month of February some ten million birds, sitting in the closest proximity to each other. This is one of the most wonderful bird sights to be seen in the world. The going and coming of these birds is a marvellous spectacle, and the noise which they make is hardly less remarkable. Their instinct in finding their nests is also extraordinary, for though they are constantly going and coming they never make a mistake. One bird sits on the nest while the other is feeding, and is relieved in turn by its mate. At times the noise is just like the sough of the sea and at others it resembles the sound of a great crowd, all the members of which are talking at once. When they leave their nests to feed, the Bougainville's Cormorants start for their fishing-grounds at five or six in the morning and

fly in a broad stream 20 or 30 yards in breadth, which often continues without interruption till one o'clock in the day. They settle on some place where fish is abundant and form immense islands on the sea a mile or so in diameter. Wide areas are covered by them, and they sit so close together that those on the outside have to rise first into the air before the birds in the interior are able to get enough air under their wings to admit of their rising directly from the sea.

Next in importance to Bougainville's Cormorant is the Pelican, known as *Pelecanus thagus*. These birds also nest in enormous flocks, which however, do not assemble so closely as the Cormorants. They often occupy great areas in the middle of Bougainville's Cormorants area, and are surrounded on all sides by the Cormorants. In the nesting season the two agree and are fairly harmonious together. The Pelicans also present a wonderful sight when they ascend. For the purpose of fishing they start off in long, narrow streams, but congregate on the fishing grounds in considerable crowds. Here they drop down into the sea like so many sacks.

When they are feeding some five or six thousand may be seen diving and fishing before they go home, having filled the great sacks with which Nature has furnished them under their lower beak. They are very much more timid than Bougainville's Cormorants. One can go close up to the nesting area of the latter without alarming them so that they fly away, but the Pelican is off before it is possible to draw very near.

There are two other species of Cormorant which are of smaller but still of considerable value. These are the Sea-Crow and Grimard's Cormorant (*P. nigra* and *P. cirriger*). The next most important birds are mostly on the Lobos Islands. They are two species of Gannet (*Sula variegata* and *S. nehouvi*), and, together with the Pelican, are the chief producers of guano on those islands. They do not sit in the same close array as the Cormorant. These Gannets are very

interesting birds. Out of the breeding-season they are extremely timid, though when they are breeding they stand up for their nests and for their young. The young are beautiful little creatures, covered with the purest white down, resembling fluff. Dr. Forbes was able to get a number of photographic studies of the Gannets, which, when they go to fish, afford the most wonderful spectacle to be seen in that region. Flocks of them numbering from 10,000 to 20,000 at a time will be seen diving and then rising high into the air. They go down like so many rockets into the sea, which is ploughed up as if a fusillade were being fired into it.

The amount of fish consumed by these birds is gigantic. Each one of them will eat from eight to ten pounds a day. Dr. Forbes kept a number of them in captivity and fed them to determine how much guano would be produced on a diet of a certain kind of fish. He then calculated the relative proportion during the nesting season that each pair of birds with the young would deposit. In this way he was able to make a very close estimate of the quantity they would deposit in a period of, say, four years, and from that estimate he divided up the whole of the guano archipelago into zones. He made certain practical suggestions for the protection of the birds with a view to allowing them to deposit and to have a rigorous close season and also a period of rest in each of four years. Only one zone would be worked every year, thus leaving a period for recovery.

Another suggestion made by Dr. Forbes was that an endeavour should be made to remove the sharp points of the rocks upon which the birds alight, thereby increasing the surface area. During the nesting season the birds live on the islands and when it is over they frequent all the rocks which rise above the surface of the sea, but the latter are so precipitous that a large amount of the guano is lost, and Dr. Forbes believes that an enormous new collecting area might be added to that already existing by the adoption of the expedient proposed by him.

Proposed General Index to 'The Ibis.'—In response to the demand of some of the Members of the Union the Committee propose, if a sufficient number of Members will subscribe, to publish an index to the bird names in 7th, 8th, and 9th Series of 'The Ibis' (1895-1912). The last General Index of this kind was issued in 1897 and dealt with the 4th, 5th, and 6th Series (1877-1894), and consisted of two portions, a Subject Index and a Name Index. Since then a complete Subject Index has been issued for each completed series in the final volume of that series, but in order to obtain a reference to names of species it is necessary to look over the indices for each successive year.

The Name Index, edited by Mr. O. Salvin, and issued in 1897, was a very complete one, and each name was indexed under its specific and generic heading. This required a volume of 472 pages. Since then the general adoption of trinomials has taken place, and to index every name under generic, specific, and subspecific headings would make a most unwieldy and costly volume. The question to be settled, therefore, is whether the names should be indexed only under generic headings (as is the Annual Index at the end of each volume) or under specific headings, or under both, as in previous volumes, and in the case of subspecies should they be indexed three times under generic, specific, and subspecific headings, or only under two—generic and subspecific.

A circular has been issued to Members asking them to record their wishes in regard to this matter, and to subscribe to the Index on completion.

Forthcoming works.—Mr. John Henry Gurney, M.B.O.U., has just completed a monograph on the Gannet or Solan Goose. It will be published at the end of October by Messrs. Witherby at a subscription price of 25s.

The Gannet is notable not only for its life-history, but also for its antiquarian interest, and Mr. Gurney has been

occupied in studying and collecting information on the subject for many years, and has embodied his researches in the present work, which will be illustrated with coloured plates, maps, and drawings, and will doubtless appeal to many of our Members.